

WHAT IS CLAIMED IS

1. A method for determining MAC address for a remote device having a known, unique DEK in a network where devices may not send a confirmation to a *SetNEK* request, the method comprising the steps of:

preparing a broadcast message with a *SetNEK* request containing a unique, temporary *NEK*;

encrypting the message with the DEK of the remote device;

transmitting the broadcast message on a network medium;

confirming receipt of the temporary *NEK* by sending a request that requires a response from the remote device which is encrypted with the temporary *NEK*; and

determining the MAC address of the remote device from the response.

2. The method of Claim 1 wherein the remote device is not a member of a network.

3. The method of Claim 2 further comprising the step of using the MAC address of the remote device in a unicast transmission to reliably confirm receipt of the temporary *NEK*.

4. The method of Claim 3 further comprising the step of using the MAC address of the remote device in a unicast transmission containing a *SetNEK* message with the local *NEK*.

5. The method of Claim 4 further comprising the step of using the MAC address of the remote device in an additional unicast transmission which is encrypted with the local *NEK*, for purposes of confirming receipt of the local *NEK*.

6. The method of Claim 2 further comprising the steps of:
using the determined MAC address to reliably send the local *NEK*;
preparing a unicast message to the remote device containing a *SetNEK* request where the *SetNEK* request contains a unique, temporary *NEK*;
encrypting the unicast message with the DEK of the remote device;
transmitting the unicast message on the medium; and
confirming receipt of the temporary *NEK* by sending a request that requires a response which is encrypted with the temporary *NEK*.

7. The method recited in Claim 1, wherein the network is a powerline network.

8. The method recited in Claim 1, wherein the remote devices are implemented according to the HomePlug Powerline Alliance standard.

9. The method of Claim 1 wherein the request is a request statistics MME and the response is a statistic response MME.

10. The method of Claim 1 wherein the request is a request channel estimation MME and the response is a channel estimation response.